Exhibit E

Maxwell Bridge Replacement Project
TRAFFIC STUDY

This discussion provides an analysis of potential traffic impacts that might occur as a result of the Maxwell Bridge Replacement Project. It looks at construction-period impacts and impacts to the surrounding area after the project is completed.

Project Description and Background

Working in conjunction with the the proposed Napa River Flood Reduction Project, Caltrans and the City of Napa are seeking to replace the existing Maxwell Bridge.

It is proposed to replace the existing Maxwell Bridge with a structure north of the existing alignment. The proposed project is a two-lane bridge replacement with a contribution from the City and County of Napa to widen the bridge to four lanes to provide for a painted median, shoulders and sidewalks in both directions. In order to accommodate navigation and to eliminate the need for a lift bridge, it is proposed to construct a fixed skyway bridge with a vertical clearance of 18.3 m. During construction one lane of traffic in each direction will be maintained on the existing structure. After the new structure is constructed, traffic will be redirected to the new structure and the existing structure will be removed. The new structure will provide a 14.4 m traveled way with 2.4 m outside shoulders. New approaches will be constructed to properly align with the new bridge.

The attached figure shows the regional location of the project. The project is located near the southern limits of the city on State Route 121.

The replacement of the existing Maxwell Bridge with a new two-lane structure has alrady been analyzed in the Napa River Flood Reduction Project Final SEIS/EIR (NRFRP FEIS/EIR), where it was found to be an environmentally-superior component of the Flood Reduction Project when compared to retention of the existing bridge. Impacts and required mitigation measures related to the two-lane bridge replacement are described in the NRFRP FEIS/EIR. This document assesses the traffic impacts related to the increase in the size of the Maxwell Bridge from two to four lanes.

Regulatory Setting

Level of Service (LOS) is used to rank traffic operation based on traffic volumes and roadway capacity using a series of letter designations ranging from A to F. Generally, Level of Service A represents free-flow conditions and Level of Service F represents forced flow or breakdown conditions. The LOS designation for intersections is generally accompanied by a unit of measure which indicates a level of delay.

The City of Napa's adopted Level of Service Standard is contained in the *Envision Napa 2020 Napa* General Plan. This standard calls for operation to be maintained at mid-LOS D or better at all intersections, with several exceptions outside of the study area. Any

changes which would cause overall intersection levels of service to drop below mid-LOS D would be considered to be potentially significant.

Description of Study Area

The study area for this analysis includes the portion of Imola Avenue between Soscol Avenue and South Jefferson Street. Study intersections include Soscol Avenue/Imola Avenue, Imola Avenue/South Coombs Street, and Imola Avenue/South Jefferson Street. The study area is shown in the attached Figure.

Imola Avenue is a State Highway between Soscol Avenue and State Route (S.R.) 29 as it is a portion of S.R. 121. The street serves as the primary crossing of the Napa River between the southeast and southwest portions of the City. The nearest crossing to the south is 2.7 miles away along S.R. 12/S.R. 29, and the nearest crossing to the north is 1.2 miles away at Third Street in downtown Napa. Two through traffic lanes exist in each direction on Imola Avenue, with the exception of the segment near the Maxwell Bridge, which narrows to one lane in each direction between Gasser Drive and Coombs Street. Striped bicycle lanes exist on both sides of the street along the entire study segment, including over the bridge.

Imola Avenue is considered a "Crucial Corridor," described as a major street whose operation is key to community-wide circulation[1]. Policies adopted in December, 1998, specifically restrict access to Imola Avenue from fronting parcels, requiring them to instead use side-street access whenever possible. Uses that must directly access Imola Avenue are required to generate less than 520 trips per acre per day.

The Soscol Avenue/Imola Avenue intersection is signalized with split-phase timing in the east/west direction. The northbound approach of Soscol Avenue includes two left turn lanes, one through lane, and one shared through/right turn lane. The southbound approach includes one left turn lane, two through lanes, and a channelized right turn lane. Eastbound Imola Avenue consists of one left turn, one through, and one right turn lane. Westbound Imola Avenue is a smaller local street that includes one left turn lane and one shared through/right turn lane. Crosswalks exist on the north and east legs of the intersection.

The intersection of Imola Avenue/South Coombs Street is also signalized. The northbound approach (Cabot Way) is comprised of a single lane. The Coombs Street southbound approach has one right turn lane and one shared through/left turn lane. Eastbound Imola Avenue has one left turn lane, two through lanes, and one right turn lane at the intersection, then narrows to a single lane east of Coombs Street. Westbound Imola Avenue widens from one lane crossing the Maxwell Bridge to four lanes with the same configuration as the eastbound approach.

Imola Avenue/South Jefferson Street is signalized, with the northbound approach comprised of one left turn lane, one shared through/left turn lane, and one right turn lane.

[1] *Envision Napa 2020: City of Napa General Plan Policy Document*, December 1998

The southbound approach includes a left turn lane and a shared through/right turn lane. Eastbound Imola Avenue has a left turn lane, two through lanes, and a right turn lane. The westbound approach includes a single left turn lane, one through lane, and a shared through/right turn lane.

Existing Traffic Conditions

Existing traffic conditions during the p.m. peak hour were evaluated by Dowling Associates for the General Plan Environmental Impact Report[2]. According to the report, the intersection at Soscol Avenue/Imola Avenue is operating acceptably at a high LOS D. The Imola Avenue/ South Coombs Street intersection is operating acceptably at LOS C, as is Imola Avenue/South Jefferson Street. Intersection levels of service and associated average vehicle delays are summarized in Table 1.

Table 1 Summary of Existing P.M. Peak Hour Intersection Levels of Service

Intersection	Existing Conditions	
	Delay	LOS
Soscol Avenue/Imola Avenue	25.1	D
Imola Avenue/South Coombs Street	24.4	C
Imola Avenue/South Jefferson Street	15.2	C

Traffic Impacts Discussion

• **Long-Term Intersection Impacts.** Contained within the policy document for the City of Napa's General Plan are the specific roadway improvements that will be required to maintain current transportation needs, as well as support the policies and recommendations set forth in the Land Use plan. Expansion of Imola Avenue (Program T-1.Aa) between Soscol Avenue and Coombs Street, which includes expansion of the Maxwell Bridge, is identified as a necessary roadway improvement.

The City of Napa's traffic model was utilized to project future traffic conditions. Long-range model projections include the impacts expected to occur with build-out of the City's 2020 General Plan, and are forecast for conditions both with and without the recommended roadway infrastructure improvements. A summary of the conditions expected to occur in 2020 at the three study intersections is provided in Table 2.

[2] *Envision Napa 2020: City of Napa General Plan Final Environmental Impact Report,* December 1998

Table 2 Summary of 2020 P.M. Peak Hour Intersection Levels of Service

Intersection	2020 Without Improvements		2020 With Improvements	
	Delay	LOS	Delay	LOS
Soscol Avenue/Imola Avenue	77.4	F	17.9	C
Imola Avenue/South Coombs Street	39.2	D	21.6	C
Imola Avenue/South Jefferson Street	16.6	C	16.9	C

Without the improvements recommended for the Soscol Avenue and Imola Avenue corridors, the first study intersection would be expected to fail. With the improvements listed in the General Plan, which include the Imola Avenue improvements as well as increased lanes and capacity on Soscol Avenue, the intersection would operate acceptably at LOS C.

Performance at the Imola Avenue/South Coombs Street intersection is more directly tied to expansion of the Maxwell Bridge. The intersection would be expected to operate unacceptably at a low LOS D, near the LOS E threshold, without increased capacity on Imola Avenue. The intersection is projected to operate at LOS C with the recommended widening.

The Imola Avenue/South Jefferson Street intersection is expected to operate acceptably at a LOS C under conditions both with and without the capacity improvements. Though the Maxwell Bridge expansion will not directly create any new trips in Napa, some diversion of trips from other areas within the City would likely occur as roadway capacity is increased. The City's traffic model accounts for such changes in traffic patterns, as is indicated by the slight increase in delay that occurs at the Imola Avenue/South Jefferson Street intersection under improved capacity conditions.

Deterioration of intersections below mid-LOS D, which is the first traffic standard of significance, is not projected to occur with the Maxwell Bridge expansion and associated increased capacity on Imola Avenue. The expansion is, therefore, expected to have no significant negative impacts on intersection performance.

Pedestrian and Bicycle Impacts

Sidewalks shall be included on the expanded segments of Imola Avenue and on the Maxwell Bridge, and bicycle facilities shall also be maintained along the entire segment. No barriers or hazards to either pedestrians or bicyclists are anticipated to be created by the completed project, and therefore, no significant adverse impacts are expected for these users.

Construction Impacts

As currently proposed, the new Maxwell Bridge would be constructed adjacent to the existing bridge, allowing traffic operation to continue in its current state until the new bridge is opened. Construction activities are expected to contribute a minimal number of trips to Imola Avenue over the course of the day, and particularly during the periods of peak traffic flow. The impact due to ongoing construction activities is therefore expected to be less than significant. It is likely that Imola Avenue will need to be closed at some point in order to revise the striping and shift traffic on to the new bridge, however, this can be done during the late night hours when traffic volumes are low in order to minimize impacts. While this will be an inconvenience, it is expected to produce less than significant impacts.